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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,233	07/25/2002	Jinliang Qiao	U 013868-3	9932
140	7590	09/09/2004	EXAMINER	
LADAS & PARRY 26 WEST 61ST STREET NEW YORK, NY 10023			FEELY, MICHAEL J	
			ART UNIT	PAPER NUMBER

1712

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,233

Applicant(s)

QIAO ET AL.

Examiner

Michael J. Feely

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2002.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 18 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-16 and 18 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 25 July 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0702.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-8 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claims 1-4, 6, 8, and 18 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: a plastic matrix.
5. Claims 5 and 7 recite the limitations "plastic" and "the plastic matrix" in the elastomer of claim 1. There is insufficient antecedent basis for this limitation in the claim.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 9, 11, 14, and 15 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 36 and 16-18 of copending Application No. 10/049,333. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

The following is a side-by-side comparison of independent claim 36 of the copending application and independent instant claim 9:

	US SN 10/049,333		Instant Application
36 (preamble)	A method for processing or toughening a plastic	9 (preamble)	A process for preparing a fully vulcanized thermoplastic polymer
36 (transition)	Comprising:	9 (transition)	Which comprises
36 (body)	(a) providing the fully vulcanized powdery silicone rubber of claim 16 (a fully vulcanized powdery silicone rubber obtained by vulcanizing silicone oil latex with irradiation, wherein the fully vulcanized powdery silicone rubber has a gel content of at least 60% by weight);	9 (body)	The step of <u>blending fully vulcanized powdery rubber with plastic.</u>
36 (body)	(b) <u>mixing said fully vulcanized powdery silicone rubber with the plastic.</u>		

In the analysis of these claims, the preamble has been given little patentable weight.

Accordingly, the focus lies in the body of the claims. The only difference between the instant claim and the copending claim is that the copending claim specifies that their fully vulcanized powdery rubber is a *silicone rubber*; however, one skilled in the art would appreciate that the broader disclosure *rubber* fully encompasses the copending invention. Furthermore, the limitations of copending claims 16, 17, and 18 provide motivation to satisfy the limitations of instant claims 15, 11, and 14, respectively.

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Therefore it would have been obvious to use a *fully vulcanized powdery rubber* in the copending application because the broad disclosure of the instant claim fully encompasses the *fully vulcanized powdery silicone rubber* set forth in the copending claim.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language;

or

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. Claims 1-16 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Qiao et al. (US Pat. No. 6,423,760).

The applied reference has a common assignee with the instant application; however, the inventive entity is different. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1, 4-8, and 18, Qiao et al. disclose: *(1)* a fully vulcanized thermoplastic elastomer *comprising a rubber phase and a plastic matrix* (column 3, line 66 through column 4, line 7), characterized in that the average particle size of the rubber phase of said fully vulcanized thermoplastic elastomer is 0.02-1 μ (column 2, lines 37-42); *(4)* characterized in that the average particle size of said rubber phase is 0.05-0.5 μ , more preferably 0.05-0.2 μ (column 2, lines 37-42); *(5)* characterized in that the weight ratio of rubber phase to plastic is 30:70 to 75:25, preferably 50:50 to 75:25 (column 4, lines 16-24); *(6)* characterized in that said rubber has a gel content of at least 60% by weight, preferably at least 75% by weight (column 2, lines 15-36); *(7)* characterized in that the plastic matrix is at least one of *see list* (column 4, lines 16-24); *(8)* characterized in that the rubber phase is at least one of *see list* (column 2, lines 49-59); and *(18)* a method of preparing a moulded article with the vulcanized thermoplastic elastomer of claim 1 (Examples 13-15).

Regarding claims 2 and 3, Qiao et al. disclose: *(2)* a fully vulcanized thermoplastic elastomer *comprising a rubber phase and a plastic matrix* (column 3, line 66 through column 4, line 7), characterized in that the shape of the rubber phase of said fully vulcanized thermoplastic elastomer is spheroidic (Figures 1 and 2); and *(3)* characterized in that the average particle size

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of the rubber phase of said fully vulcanized thermoplastic elastomer is 0.02-1 μ (column 2, lines 37-42).

Regarding claims 9-16, Qiao et al. disclose: **(9)** a process for preparing a fully vulcanized thermoplastic elastomer, which comprises the step of blending fully vulcanized powdery rubber with plastic (column 3, line 66 through column 4, line 7); **(10)** characterized in that the weight ratio of rubber phase to plastic is 30:70 to 75:25, preferably 50:50 to 75:25 (column 4, lines 16-24); **(11 & 13)** characterized in that the average particle size of the rubber phase of said fully vulcanized thermoplastic elastomer is 0.02-1 μ (column 2, lines 37-42); **(12)** characterized in that the shape of the rubber phase of said fully vulcanized thermoplastic elastomer is spheroidic (Figures 1 and 2); **(14)** characterized in that the average particle size of said rubber phase is 0.05-0.5 μ , more preferably 0.05-0.2 μ (column 2, lines 37-42); **(15)** characterized in that the rubber phase is at least one of *see list* (column 2, lines 49-59); and **(16)** characterized in that the plastic matrix is at least one of *see list* (column 4, lines 16-24).

10. Claims 1, 5-8, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Angus et al. (Pub. No.: US 2004/0147677).

Regarding claims 1, 5-8, and 18, Angus et al. disclose: **(1)** a fully vulcanized thermoplastic elastomer *comprising a rubber phase and a plastic matrix* (paragraphs 0020, 0021, and 0027), characterized in that the average particle size of the rubber phase of said fully vulcanized thermoplastic elastomer is 0.02-1 μ (paragraph 0045); **(5)** characterized in that the weight ratio of rubber phase to plastic is 30:70 to 75:25, preferably 50:50 to 75:25 (paragraph 0026); **(6)** characterized in that said rubber has a gel content of at least 60% by weight, preferably at least 75% by weight (paragraph 0026); **(7)** characterized in that the plastic matrix is

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at least one of *see list* (paragraph 0034); **(8)** characterized in that the rubber phase is at least one of *see list* (paragraph 0021); and **(18)** a method of preparing a moulded article with the vulcanized thermoplastic elastomer of claim 1 (paragraph 0043).

11. Claims 9, 10, 15, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Sahnoune et al. (Pub. No.: US 2004/0039075).

Regarding claims 9, 10, 15, and 16, Sahnoune et al. disclose: **(9)** a process for preparing a fully vulcanized thermoplastic elastomer, which comprises the step of blending fully vulcanized powdery rubber with plastic (paragraphs 0002, 0021, and 0026); **(10)** characterized in that the weight ratio of rubber phase to plastic is 30:70 to 75:25, preferably 50:50 to 75:25 (paragraph 0016); **(15)** characterized in that the rubber phase is at least one of *see list* (paragraphs 0014-0016); and **(16)** characterized in that the plastic matrix is at least one of *see list* (paragraph 0010).


Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is 571-272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Michael J. Feely", with a long, sweeping horizontal line extending to the right.

Michael J. Feely
Patent Examiner
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September 7, 2004